

MULTI-CHANNEL SIDEBAND TRANSCEIVER, 1000 WATTS

TM-1000



The TM-1000 Transceiver is a 1000-watt PEP device capable of operating between 1.6 and 26 MHz in up to eight pre-set channels. The standard model is designed to transmit in the CW, AME, USB and LSB modes and with selected options, can be automated through to the antenna. Although simplex operation is standard, eight-channel half-duplex is available on special order.

The transceiver is actually a two-unit system: the TM-125 Transceiver driving the high efficiency TMA-1K Linear Amplifier. Both units are housed in strong, desk type cabinets that can be easily modified for land or marine mobile mounting. The linear is linked to the transceiver by a single RF cable and can be remotely located if desired. A front panel switch provides for automatic insertion or omission of the linear in the transmitter chain.

The automated TM-1000 includes bridge tuning of the linear amplifier when any transceiver channel is selected. Highly reliable servos and amplifiers in the linear are regulated by pre-set potentiometer controls and are automatically positioned for the proper tuning locations. If used with the ATU-1K antenna tuning unit, complete automated operation is possible through to the antenna system.

The TM-1000 contains front panel controls for AF and RF gain, variable BFO (clarifier), and squelch in addition to switches for power, automatic noise limiter, and output power/received strength metering. It operates from a 115/230 VAC source and is completely solid state up to the final RF stages. The transceiver is designed for rugged use in marine or land mobile and fixed station applications. On special order, it can be equipped for selective calling.

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THE TECHNICAL MATERIEL CORPORATION

AND SUBSIDIARIES

TECHNICAL SPECIFICATIONS

FREQUENCY INFORMATION

- Range**
1.6 to 26 MHz.
- Stability**
One part per million/^oC.
Higher stability available on request.
- Control**
High frequency crystal oscillators
OPTIONAL: Ovenized crystal oscillators

OPERATING PARAMETERS

- Modes**
CW(A1); AME(A3H); SSB(A3J)
- Channels**
Up to eight, simplex channels.
OPTIONAL: Eight half-duplex channels
- Power Output**
125 watts PEP
- Output Impedance**
Nominal 50 ohms, unbalanced
- Front Panel Controls**
Channel Select Switch
RF and AF Gain
Variable BFO (Clarifier)
Squelch Adjust
Mode Select
Power/Operate Switch
Phone and Key Jacks
Automatic Noise Limiter Switch
Monitor Meter Switch
- Rear Panel Features**
Main Power Input
RF Input and Output
600-ohm, 1mw, Audio Output
600-ohm Audio Input
Amplifier Control Output
Push-To-Talk Line
Input Power Fuses

ENVIRONMENTAL AND INSTALLATION

- Operating Conditions**
0 to +50^oC; up to 95% relative humidity
- Primary Power**
10-40 VDC, negative ground
115/230 VAC, 50/60 Hz, single phase
- Cooling**
High capacity forced air; heat sinks
- Size and Weight**
5½" high X 14½" wide X 16" deep
Approximately 40 lbs.
- Shock and Vibration**
Designed for fixed station or mobile use
including maritime and vehicle mobile.
- Loose Items**
Power Cord
Mating RF Connectors
CAB-20 Desk Top Cabinet
Instruction Manual

RECEIVE SECTION

- Sensitivity**
1.0uv over range for 10db [S+N] /N
- Selectivity**
+/-3db at 3KHz; -60db at 11 KHz.
- Automatic Gain Control**
Internal circuits insure a less than 10db
change in output for an 80db RF change
over 1uv at the antenna input.
- Output Level**
One watt PEP into internal speaker.
0dbm into 600-ohm balanced line
- Input Impedance**
50 ohms nominal, unbalanced

TRANSMIT SECTION

- Signal/Distortion Ratio**
At least 30db down from full PEP output
- Unwanted Sideband Rejection**
Min. 50db down from full PEP output
- Noise Level**
Better than 40db below full PEP output
- Spurious Emission**
Min. 40 db down from mean power.
- Audio Response**
300-3000 Hz, +/-2 db
- Audio Inputs**
600-ohm line, balanced or unbalanced,
-20 to +10dbm
High/Low impedance microphone w/PTT

OPTIONAL ACCESSORIES

- Model TMA-350 Linear Amplifier**
Provides 350 watts PEP output with TM-125
- Model TMA-1K Linear Amplifier**
Provides 1000 watts PEP output.
- Model ATU-350 Antenna Tuning Unit**
Provides antenna matching for TM-125.
- Model ATU-1K Antenna Tuning Unit**
Provides antenna matching for TM-1000
- Series VTA Transmitting Antennas**
Suitable for both receiving and transmitting
18 or 35-foot aluminum or fiberglass whips.
- Model HP-1 Headphones**
- Model MK-1 Microphone**
- Model KY-1 Telegraph Key**
- KIT O-5005-1**
Operating spare parts kit.
- KIT M-5005-1**
Maintenance spare parts kit (6 months)
- Model TOC-7**
Transit Carrying Case, Fiberglass
- Model CAB-40**
4-foot relay rack cabinet, 19" wide

We reserve the right to
make engineering changes



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